

AMENDMENTS

In the Claims

1-14. (Canceled)

15. (Currently Amended) A method of operating a programmed industrial controller equipped with a runtime system comprising a plurality of priority levels for a production machine comprising the steps of

executing a plurality of user tasks each comprising a program sequence for operating the production machine on a first priority level in a round robin fashion;

providing a check condition instruction for said tasks, wherein the occurrence of a check condition instruction in a first task initiates a checking for occurrence of a desired condition in the operation of the machine on a higher priority level wherein if the desired condition is not met, the execution of the current task is immediately stopped and execution is switched to the next task while said condition is concurrently checked, and a occurrence of said condition stops the

stopping the program flow of the machine operation execution of any of said next tasks while checking for the occurrence of said desired condition and switches execution back to said first task waiting for said condition to occur,

increasing the priority of checking for the desired condition relative to the current task priority in the program flow, and

immediately continuing the program flow upon satisfaction of the condition.

16. (Previously Presented) The method according to claim 15, wherein once the condition has been satisfied, ~~the~~ a following program sequence in said first task is processed with said higher priority up to an explicit end, the old task priority being resumed after the explicit end of the program sequence.

17. (Previously Presented) The method according to claim 15, wherein process signals and/or internal signals of the controller and/or variables from user programs are used for the formulation of the conditions.

18. (Previously Presented) The method according to claim 15, wherein the conditions contain logical and/or arithmetic and/or any desired functional combinational operations.

19. (Previously Presented) The method according to claim 15, wherein the user program for the operation of the controller is capable of responding in the manner set forth more than one such condition.

20. (Previously Presented) The method according to claim 15, wherein there are provided for the controller, a plurality of user programs which operate in the manner set forth.

21. (Previously Presented) The method as claimed according to claim 15, wherein the program for operating the controller is available as a customary programming-language construct.

22. (Previously Presented) An industrial controller for carrying out the method according to claim 15, wherein the runtime system of the controller contains a running level model which has a plurality of running levels of different types with different priority, said running levels comprising:

- a) a group of levels with synchronously clocked levels, having at least one system level and at least one user level, the levels of this group of levels being capable of being prioritized with respect to one another;
- b) a user level for system exceptions;
- c) a time-controlled user level;
- d) an event-controlled user level;
- e) a sequential user level; and

- f) a cyclical user level; and wherein user levels of the group of levels
- a) are able to run synchronously in relation to one of the system levels of the group of levels a).

23. (Previously Presented) The industrial controller according to claim 22, wherein the basic clock of the running level model is derived from any one of an internal timer, an internal clock of a communication medium, an external device or a variable which belongs to the technological process of the machine.

24. (Previously Presented) The industrial controller according to claim 22, wherein the time-controlled user level, the event-controlled user level, the sequential running level, the cyclical background level and the user level for system exceptions are optional.

25. (Previously Presented) The industrial controller according to claim 22, wherein the synchronous levels are clocked in relation to the basic clock with a step-up and/or step-down ratio and/or in the ratio 1:1.

26. (Previously Presented) The industrial controller according to claim 22, wherein further prioritizing stratifications are provided within the running levels.

27. (Previously Presented) The industrial controller according to claim 22, wherein user tasks can optionally be run through during system running-up and/or during system running-down.

28. (Previously Presented) The industrial controller according to claim 22, wherein user programs which, depending on the type of user level, are programmed in a cycle-oriented or sequential manner can be loaded into the user levels.

29. (NEW) The method according to claim 16, wherein the explicit end is an end condition instruction.

30. (NEW) The method according to claim 16, wherein the explicit end is an instruction indicating the end of said first task.